

**BRUHAT BANGALORE MAHANAGARA PALIKE****MEASUREMENT SHEET****RA 1ST AND FINAL BILL**

Name of work:

Improvements to Roads at Katteramma Temple Surrounding Areas in Ward No. 10 (Doddabommasandra), Vidyananyapura Sub Division.

Estimated Cost :

Rs. 35.00 Lakhs

Head of Account :

P-1878

Job Number

010-18-000048

Name of Agency:

Executive Engineer, KRIDL

Work order No:

BBMP/EE/BTP/60/2018-19 Dated: 23.07.2018

Measurements Recorded on :

SI No.	Description	No.	L	B	D	Qty	Rate / Unit	Amount
1	Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications complete as per specifications						Cum	
	Katteramma Temple Surrounding Area	1	30.00	4.1+4.0	0.20	24.30		
				2				
		1	30.00	4.0+4.0	0.20	24.00		
				2				
		1	5.80	4.0+4.1	0.20	4.70		
				2				
		1	30.00	4.1+4.1	0.20	24.60		
				2				
		1	29.50	4.1+4.0	0.20	23.90		
				2				
		Total Qty =					101.49	
		Qty Limited to =					100.80	199.36
								20095.00
2	Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180 kgs with 40mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregates @ 0.57 cum machine mixed, concrete laid in layers not, exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications.						Cum	
	Katteramma Temple Surrounding Area	1	30.00	4.1+4.0	0.15	18.23		
				2				
		1	30.00	4.0+4.0	0.15	18.00		
				2				
		1	5.80	4.0+4.1	0.15	3.52		
				2				
		1	30.00	4.1+4.1	0.15	18.45		
				2				
		1	29.50	4.1+4.0	0.15	17.92		
				2				
		Total Qty =					76.12	
		Qty Limited to =					75.60	5159.02
								390022.00

Assistant Engineer

Assistant Executive Engineer
Vidyananyapura Sub Division
BBMP, Bangalore - 97

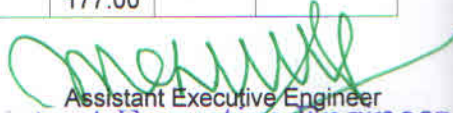
Sl No.	Description	No.	L	B	D	Qty	Rate / Unit	Amount
3	Cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregates , with superplasticiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rammers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges , joint filler, separation membrane, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M20 (at 300Kg per cum coarse aggregate @ 0.64cum and fine aggregate @ 0.43cum)						Cum	
	Katteramma Temple Surrounding Area	1	30.00	4.1+4.0	0.125	15.19		
				2				
		1	30.00	4.0+4.0	0.125	15.00		
				2				
		1	5.80	4.0+4.1	0.125	2.94		
				2				
		1	30.00	4.1+4.1	0.125	15.38		
				2				
		1	29.50	4.1+4.0	0.125	14.93		
				2				
		Total Qty = 63.43						
		Qty Limited to = 63.00					5508.82	347056.00
4	Vaccum de-watering with vacuum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.						Sqm	
	Katteramma Temple Surrounding Area	1	30.00	4.1+4.0		121.50		
				2				
		1	30.00	4.0+4.0		120.00		
				2				
		1	5.80	4.0+4.1		23.49		
				2				
		1	30.00	4.1+4.1		123.00		
				2				
		1	29.50	4.1+4.0		119.48		
				2				
		Total Qty = 507.47						
		Qty Limited to = 504.00					95.40	48082.00
5	Wet Mix Macadam KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.						Cum	
	Katteramma Temple Surrounding Roads	1	30.00	4.6+4.5	0.23	31.40		
				2				
		1	30.00	4.5+4.4	0.23	30.71		
				2				
		1	30.00	4.4+4.6	0.23	31.05		
				2				
		1	30.00	4.6+4.5	0.23	31.40		

Assistant Engineer

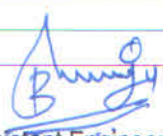
Assistant Executive Engineer
Vidyanarayapura Sub Division
BBMP, Bangalore - 97

Sl No.	Description	No.	L	B	D	Qty	Rate / Unit	Amount
				2				
		1	30.00	4.5+4.5	0.23	31.05		
				2				
		1	30.00	4.5+4.4	0.23	30.71		
				2				
		1	30.00	4.4+4.6	0.23	31.05		
				2				
		1	30.00	4.6+4.5	0.23	31.40		
				2				
		1	10.30	4.5+4.5	0.23	10.66		
				2				
		1	30.00	4.6+4.5	0.23	31.40		
				2				
		1	30.00	4.5+4.4	0.23	30.71		
				2				
		1	30.00	4.4+4.5	0.23	30.71		
				2				
		1	30.00	4.5+4.4	0.23	30.71		
				2				
		1	30.80	4.4+4.5	0.23	31.52		
				2				
Total Qty =						414.44		
Qty Limited to =						414.00	1768.08	731985.00
6	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH specification						Sqm	
	Katteramma Temple Surrounding Roads	1	30.00	5.6+5.5		166.50		
				2				
		1	30.00	5.5+5.4		163.50		
				2				
		1	30.00	5.4+5.6		165.00		
				2				
		1	30.00	5.6+5.5		166.50		
				2				
		1	30.00	5.5+5.5		165.00		
				2				
		1	30.00	5.5+5.4		163.50		
				2				
		1	30.00	5.4+5.6		165.00		
				2				
		1	30.00	5.6+5.5		166.50		
				2				
		1	10.30	5.5+5.5		56.65		
				2				
		1	30.00	6.1+5.9		180.00		
				2				
		1	30.00	5.9+5.8		175.50		
				2				
		1	30.00	5.8+6.0		177.00		


Assistant Engineer


Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

Sl No.	Description	No.	L	B	D	Qty	Rate / Unit	Amount
				2				
		1	30.00	6.0+6.1		181.50		
				2				
		1	30.80	6.1+6.0		186.34		
				2				
		Total Qty =					2278.49	
		Qty Limited to =					2275.00	3.18
								7235.00
7	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.						Sqm	
		Qty Vide Item No. 3				2275.00		
						2275.00	11.66	26527.00
8	Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 - using 40/60 TPH capacity H.M.P. with sensor paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen						Sqm	
	Katteramma Temple Surrounding Roads	1	30.00	5.6+5.5	0.05	8.33		
				2				
		1	30.00	5.5+5.4	0.05	8.18		
				2				
		1	30.00	5.4+5.6	0.05	8.25		
				2				
		1	30.00	5.6+5.5	0.05	8.33		
				2				
		1	30.00	5.5+5.5	0.05	8.25		
				2				
		1	30.00	5.5+5.4	0.05	8.18		
				2				
		1	30.00	5.4+5.6	0.05	8.25		
				2				
		1	30.00	5.6+5.5	0.05	8.33		
				2				
		1	10.30	5.5+5.5	0.05	2.83		
				2				
		1	30.00	6.1+5.9	0.05	9.00		
				2				
		1	30.00	5.9+5.8	0.05	8.78		
				2				
		1	30.00	5.8+6.0	0.05	8.85		
				2				
		1	30.00	6.0+6.1	0.05	9.08		
				2				
		1	30.80	6.1+6.0	0.05	9.32		
				2				
		Total Qty =					113.92	
		Qty Limited to =					113.75	7176.20
								816293.00


Assistant Engineer


Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

Sl No.	Description	No.	L	B	D	Qty	Rate / Unit	Amount
9	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.						Sqm	
		Qty Vide Item No. 7				2275.00		
						2275.00	11.66	26527.00
10	Providing and laying bituminous concrete 40 mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - using 40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-30 Bitumen						Cum	
	Katteramma Temple Surrounding Roads	1	30.00	5.6+5.5	0.04	6.66		
				2				
		1	30.00	5.5+5.4	0.04	6.54		
				2				
		1	30.00	5.4+5.6	0.04	6.60		
				2				
		1	30.00	5.6+5.5	0.04	6.66		
				2				
		1	30.00	5.5+5.5	0.04	6.60		
				2				
		1	30.00	5.5+5.4	0.04	6.54		
				2				
		1	30.00	5.4+5.6	0.04	6.60		
				2				
		1	30.00	5.6+5.5	0.04	6.66		
				2				
		1	10.30	5.5+5.5	0.04	2.27		
				2				
		1	30.00	6.1+5.9	0.04	7.20		
				2				
		1	30.00	5.9+5.8	0.04	7.02		
				2				
		1	30.00	5.8+6.0	0.04	7.08		
				2				
		1	30.00	6.0+6.1	0.04	7.26		
				2				
		1	30.80	6.1+6.0	0.04	7.45		
				2				
		Total Qty =					91.14	
		Qty Limited to =					91.00	8118.54 738787.00
	Sub Total							3152609.00
	KRIDL Charges @ 10%							315261.00
	labour Cess @ 1%							31526.00
							Total	3499396.00


Assistant Engineer


Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97